

**IBM 3270  
Information  
Display System**

**more than meets  
the eye**

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### Getting the data you need

### One system, many uses

Current information is the raw material of good business and management decisions.

Today, people in all types of business are more dependent than ever on such information—thanks to advances in computer technology such as data base/data communications, distributed processing and interactive computing.

Ready access to stored data is now a basic and constant need. The IBM 3270 Information Display System more than meets this need. Through advanced design and functional capability, for example, it can improve display operator efficiency as well as effect significant reductions in total system costs.

The IBM 3270 Information Display System is a family of alphanumeric display stations, printers and control units that can handle a wide range of online data processing applications either locally or remotely.

The system can be used for simple, interactive or complex inquiries. It can be used to perform data entry functions... customer inquiry... message switching... high-speed printing... production control... order entry... serve as a computer console... or handle a variety of other related applications.

In addition, the 3270 system can be used in conjunction with the 3790 Communication System—under IBM's Systems Network Architecture (SNA), an innovative communications design that helps simplify the connection of different online terminals and distributed processing controllers to the same line.



## A modular approach

The 3270 family of products offers you flexible growth opportunities.

Modularity is the key to the 3270 system's flexibility. Users can combine displays and printers into various configurations to meet any number of requirements. Equally important, users can take advantage of new enhancements while building on their initial investment.

The 3270 system products include the IBM 3275 Display Station; the IBM 3276 Control Unit/Display Station; the IBM 3277 and 3278 Display Stations; the IBM 3284, 3286, 3287, 3288 and 3289 printers; and the IBM 3271, 3272 and 3274 controllers.

The 3270 system can be attached locally to your computer... remotely over high-speed transmission lines... or to the 3790 Communication System in a distributed processing environment.

The system can be a standalone remote station with or without a printer... or a small cluster of up to eight devices... or large clusters of printers and displays with up to 32 devices.

In addition, multiple control units can be used to create a network comprising hundreds of displays and printers for your far-ranging information needs.



## Passing the screen test

The 3270 display stations are designed to satisfy the stringent demands for character clarity by providing quality images on a high-contrast, low-glare screen.

These displays are available in 480-, 960-, 1,920-, 2,560- and 3,440-character screens. A variety of display sizes can be combined for use in a single installation. The 480-character screen presents the information in 12 lines of 40 characters—while the larger screens offer 12, 24, 32 or 43 lines of 80 characters.

Users who choose to tailor new applications for the 960-, 2,560- or 3,440-character screen sizes can also retain their current application investment—as these displays accommodate the 480- and 1,920-character screen formats. Upper and lower case characters are also available.



## **Increased operator efficiency**



In many display applications, the operator represents the most costly element of the display workstation. The IBM 3270 system was designed with the operator in mind—from display stations to the computer.

As a result, this system can increase operator efficiency while offering a greater return on your display station investment.

Together, the computer and the 3270 have decreased the number of functions required of the operator. The added functions and flexibility of 3270 keyboards combine with the computer to give the operator the capabilities for improved performance with reduced effort.

The 3270 displays can utilize a number of different keyboards to satisfy the specific requirements of data entry, inquiry APL, text processing, or the operator console. The availability of multiple keyboards makes the 3270 a valuable general-purpose device. And for maximum operator convenience and efficiency, each keyboard is moveable.

The protected data format of the 3270 may be made to include all the constant information in a given transaction. The operator need enter only the "exception" or variable data. And the operator can obtain a new format from the computer either by depressing a predetermined program function key, or by making the request from the keyboard.

A number of special 3270 features also offer opportunities for increased operator efficiency.

For example, a Selector Light Pen permits the operator to transmit information to the computer by using the pen to select a specific item in a list displayed on the screen.

The Selector Light Pen can improve the speed and accuracy of the display user. It can be used to eliminate the typing of inputs with many applications—including the selection of items from menu lists down to a simple either/or selection of items.

For users who do not have a high volume Selector Light Pen requirement, some 3270 models offer an optional cursor select function. This feature allows the selection of a field with the cursor rather than with the light pen.

Another available feature is the Operator Identification Card Reader or Magnetic Slot Reader. This feature can help improve application design flexibility by providing for the input of identification-related information.

Still another 3270 feature is the optional Audible Alarm. This feature can be used to gain the operator's attention...to alert the operator when the next to last position of the screen is reached...or to signal for special attention.

## **Increased communications efficiency**

The operator efficiencies of the 3270 are complemented by its ability to effect substantial reductions in communications line utilization.

Contributing to the increased communications efficiency of the 3270 is SNA. SNA provides an architecture and family of terminals capable of sharing a single communications line and supporting multiple applications. SNA also allows for planning flexible and convenient communications systems growth.

Regardless of your need in a remote location—batch input, message switching, high-speed printing, production control, on-line key entry or inquiry—one common network can provide all these functions to all your locations.

The 3270 can share a single leased communication line with other IBM remote communication devices at speeds up to 9,600 bps.

In addition, with the 3270 system, the number of characters sent over a line can be substantially reduced—since only that portion of information in each transaction which must change, or be added, need be transmitted. Formats using successive interactions, protected data or lists selected with the light pen, need not be retransmitted to the computer—leaving the line open for additional traffic.



## **Advanced operator console**

The 3270's Display Operator Console is designed to help raise the level of operational efficiency in the computer room. As an advanced operator console, it provides the necessary operator interface functions for the IBM System/370 family of computer systems.

System performance can improve through the 3270's faster and more flexible communication with the operator. And since operator functions are more automated, the incidence of human error can be reduced.

Operational information generated by the system is displayed almost instantaneously on the screen. To further optimize system operation, the 3270 can, for example, automatically generate a display on the status of all active jobs. This status can be updated without operator intervention—providing a "picture" of jobs and their status.

For large-system users, multiple 3270 stations can be utilized effectively... in the tape room, one near the disk area, another near the printers, and one or more for the operator in the computer room. As a result, messages required in a given functional area can be sent there directly—improving system operation.



## **Meeting hard copy needs**

For installations requiring hard copy, the 3270 system offers you a choice of unidirectional and bidirectional matrix printers capable of operating at speeds of 80 or 120 characters per second maximum, as well as line printers operating at speeds from 120 to 300 lines per minute maximum.

## **Meeting security needs**

Special 3270 features are available for maximum data security. A key-operated Security Lock, for example, can be installed on each display station to protect it from unauthorized use. This display station cannot operate unless the Security Key Lock is turned to the ON position.

A non-display capability permits the operator to key a security code into the computer without it being displayed on the screen. The computer program can then validate the code and open the appropriate jobs and files to the operator based on predetermined authorization.

The Operator Identification Card Reader or the Magnetic Slot Reader can read a magnetic striped card under program control to identify the operator and read in other control information. Encoded information is entered in non-display, non-print mode.



## A supported system

IBM supports your 3270 Information Display System with a full range of services.

**Systems Engineering Services:** The IBM Systems Engineer has the expertise to help you design and install your system quickly, smoothly and efficiently.

**Custom Contract Services:** Specialized management and technical skills can be applied to a specific project. This IBM contract service is available for design and analysis, implementation, or both.

**Customer Set-Up (CSU):** This is a philosophy of design, manufacturing, testing and marketing for IBM products. IBM has recognized the customer need to be able to set up, relocate, add, or remove data processing devices to adjust to continually changing work flow and volume requirements. The 3274 (remote), 3276, 3278, 3287 and 3289 have been designed to meet the need—and are identified as customer set-up devices.

These CSU products provide the ability to quickly set up and check out newly received or relocated devices. All devices are provided with convenient customer access panels for

attachment of cables, keyboards and power line cords. And without the need for tools or special skills. Built-in test procedures are employed for testing the individual device and subsystem to aid the checkout process.

**Customer Serviceability Aids:** Significant function has been designed into the 3270 to provide greater availability to the customer through the use of problem determination and recovery procedures that are easily understood and used by the operator. The procedures are provided by the Problem Determination Guide manual. These problem determination procedures are complemented by additional microcoded procedures on the 3274 and 3276.

**Field Engineering:** IBM Customer Engineers provide an effective program of preventive maintenance, operational enhancements through engineering changes, and improved system serviceability and availability via new diagnostic tools and techniques.

**Education:** Two basic levels of education are offered: Professional courses for IBM data processing skills; and Systems Feature Instruction for product features and characteristics.

**Program Products:** Individual IBM programs provide the base for application needs that range from industry to cross-industry to scientific.

Your IBM marketing representative can help select the level of support best suited for your installation requirements.

## A system to match your growth

The IBM 3270 Information Display System is designed to keep in step with your pace of growth.

In fact, the 3270—along with the growing family of SNA products—has the capability of providing a total communications network within the data processing environment.

Talk to your IBM marketing representative now. Find out how the 3270 can be an integral part of your computer operations. Find out how you can extend and adapt your 3270 system to meet future needs...with minimum impact to your original investment.

Remember, the IBM 3270 Information Display System offers more than meets the eye.



Photographs show design models